

METHODS OF AND APPARATUS FOR SEPARATING AND DETECTING  
NUCLEIC ACID

ABSTRACT OF THE DISCLOSURE

A thin gel for separating and detecting a target molecule, (e.g., an analyte) and methods of use thereof is described. The gel can be optionally reinforced to facilitate removal from an electrophoretic apparatus, wherein the gel matrix comprises immobilized (e.g., covalently bound) capture probes capable of specifically hybridizing with, or binding to, the analyte to be detected. The gel is thin and very short assay times can be achieved facilitating rapid detection of analytes. An assay apparatus is suitable for use with an electrophoretic assay system for the detection of, or separation and detection of an analyte in a biological sample is also described.